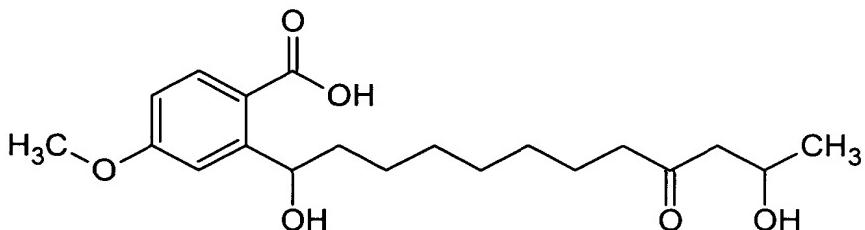


CLAIMS

1. A bioactive compound 12- (2'-CARBOXY- 5'-METHOXYPHENYL)-2,12-DIHYDROXY-DODECA-4-ONE "Sporotricolone" of formula (I) having primarily acetylcholinesterase (AchE) enzyme inhibitor activity that is obtained from fungus *Sporotrichum* species.



FORMULA (I)

10

2. The compound according to claim 1 having the following characteristic properties:

Solubility: Highly soluble in ethyl acetate, methanol and acetone.

UV (ethyl acetate) λ_{max} : 265 nm, 312 nm.

15 **^1H NMR spectrum (DMSO, $\delta_{\text{TMS}} = 0.00$ ppm);**

δ 1.03 (3H, d, J=6.3Hz, -CH-CH₃)

δ 1.2-2.7 (14H, m, 7x - CH₂)

δ 3.6-3.8 (m, Ar-O-CH₃ and Ar-CH-OH)

δ 7.20 (1H, d, J=2.5Hz, C₆-H)

20 δ 7.30 (2H, d, J = 7.1 Hz, C₃-H and C₄-H)

Mass spectrum (EI, 70 eV, 25° C, 200-ul amp):

m/e: 336 (M+), 279(366-87), 167(274-112), 57 (CH₂COCH₃), 43, 29.

- 25 3. The compound according to claim 1, wherein the purity of the compound is established

by TLC and RP HPLC.

4. The compound according to claim 1, wherein said compound is named as "Sporotricolone".
5. The compound according to claim 1, wherein said compound is an inhibitor of the enzyme acetylcholinesterase from the rat brain as well as erythrocytes with a IC₅₀ value of 20 x 10⁻⁶ M.
6. The compound according to claim 1, wherein said compound also acts as an inhibitor of serine esterase of the rat liver serum.
7. The compound according to claim 1, wherein said compound having insecticidal properties.
- 10 8. The compound according to claim 1, wherein said compound effective against mosquito larvae at an optimum concentration of 70 µg/ml water (70 ppm) when exposed for 24 hrs.
9. The compound according to claim 1, wherein the insecticidal activity of the compound against mosquito larvae is selected from *Culex quinquefasciatus*.
- 15 10. The compound according to claim 1, wherein said compound as acetylcholineesterase inhibitor having potential application as a drug for Alzheimer's disease or dementia.
11. A process for the isolation of the compound 12- (2'-CARBOXY- 5'-METHOXYPHENYL)-2,12-DIHYDROXY-DODECA-4-ONE "Sporotricolone" from the fungus Sporotrichum species, said process comprising the steps of:
- 20 (a) extracting the fermented solid with an organic solvent;
- (b) filtering the extract of step (a) through a cloth or Whatman filter paper to obtain a clear solution;
- (c) evaporating the solution of step (b) under reduced pressure to obtain a crude extract;
- (d) purifying the crude extract of step (c) by column chromatography over silica gel and eluting with mixture of organic solvents of increasing polarity;
- 25 (e) pooling active eluted fraction of step (d) and further subjected to column chromatography over silica gel by eluting with mixture of organic solvents with increasing polarity;
- (f) repooling the active eluted fractions of step (e);
- (g) evaporating the pooled fractions of step (f) to get a residue; and

(h) dissolving the residue in step (g) in ethyl acetate to yield the pure compound “Sporotricolone”.

12. The process according to claim 11, wherein in step (a) the organic solvent is selected from a group consisting of ethyl acetate, acetone or methanol and preferably ethyl

5 acetate.

13. The process according to claim 11, wherein in step (d) the mixture of organic solvents is selected from the combination of hexane: diethyl ether and chloroform: methanol mixtures.

14. The process according to claim 11, wherein in step (e) the mixture of organic solvent
10 used is chloroform : ethyl acetate mixture.